



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

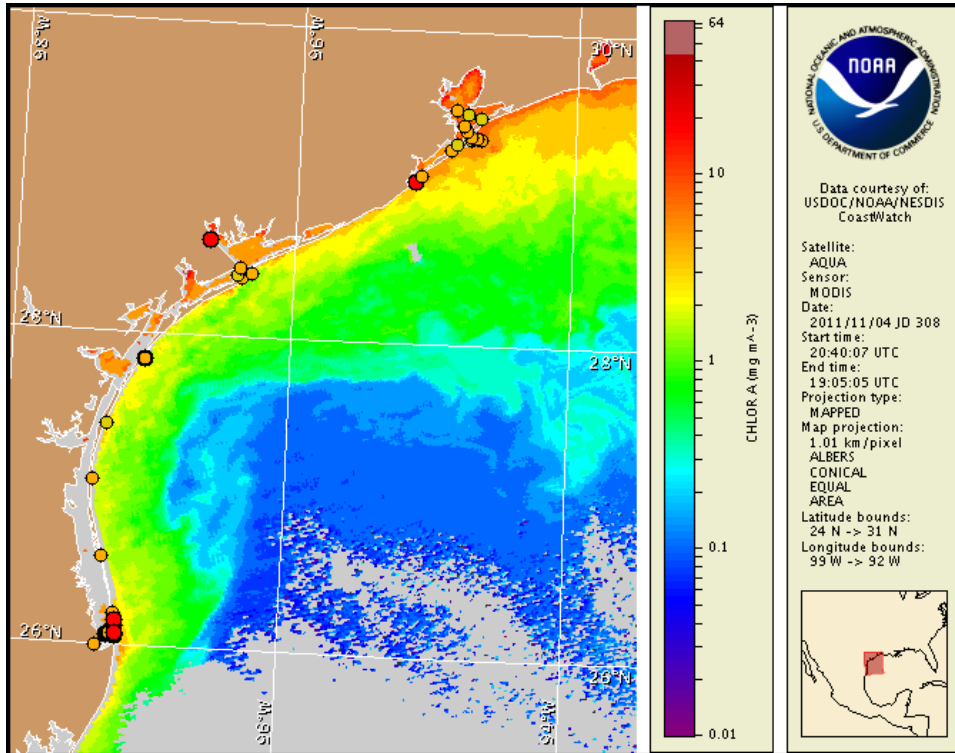
Monday, 07 November 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, November 3, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from October 28 to November 6 shown as red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:
<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area. Patchy high impacts are possible today through Wednesday along the Padre Island National Seashore and South Padre Island regions, and within the lower Laguna Madre and Brownsville Ship Channel area. Patchy high impacts are possible today through Tuesday, with patchy low impacts possible Wednesday, in the Galveston/Freeport area, Matagorda Peninsula, and Port Aransas/Corpus Christi regions. No additional impacts are expected at the coast in Texas today through Wednesday, November 9. Respiratory irritation has been reported from the Aransas Pass and South Padre Island regions. Dead fish have been reported from the Matagorda Bay region, Corpus Christi Bay, and alongshore South Padre Island. Discolored water has been reported in Corpus Christi Bay and alongshore South Padre Island.

Analysis

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area.

No new samples have been received from the Galveston or Matagorda Bay regions. The most recent samples from these areas indicate *Karenia brevis* concentrations ranging between 'low b' and 'high' in both regions (10/31-11/1; TPWD). Dead fish have been reported within Carancahua Bay, north of Matagorda Bay (11/4; TPWD).

In the Aransas/Corpus Christi region, samples at the UTMSI pier and marina continue to indicate 'low b' to 'medium' *K. brevis* concentrations within Aransas Pass at the Gulf (11/4; TPWD). Discolored water continues to be present within Corpus Christi Bay from approximately Cole Park to Robert Drive. Dead fish have been reported from the Robert/Ocean Drive area (11/4; TPWD).

No new samples have been received from the Padre Island National Seashore region, where the latest samples indicate 'low b' and 'medium' *K. brevis* concentrations (10/28; TPWD). Alongshore South Padre Island (Gulf), six samples collected from Beach Access 5 to the UTPA Coastal Studies Lab all indicate that *K. brevis* concentrations remain 'high' where 'medium' to 'high' concentrations were last reported (11/4-6; TPWD). Samples collected within Brazos Santiago Pass and at the Isla Blanca boat ramp also indicate that concentrations remain at 'medium' to 'high' in this area (11/4-5; TPWD). Several samples collected within the lower Laguna Madre indicate that *K. brevis* concentrations have decreased, including a decrease from 'high' to 'medium' concentrations at the west end of the Queen Isabella Causeway and Sea Ranch Marina, and a decrease from 'high' to 'low a' and 'low b' concentrations at the east end of the Queen Isabella Causeway (11/4-5; TPWD). 'Low a' *K. brevis* concentrations were also collected farther north in the lower Laguna Madre, about three miles north of the causeway on South Padre Island (Old Parrot Eyes; 11/4; TPWD). Respiratory irritation has been reported

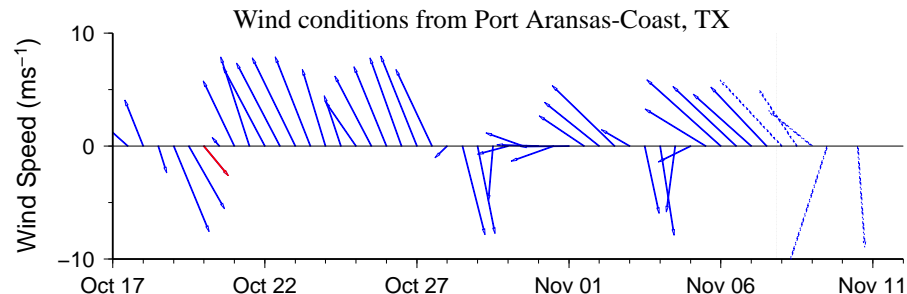
alongshore South Padre Island, with dead fish reported from the town beaches and discolored water visible beyond the first trench (11/4; TPWD).

Recent imagery is cloudy along the Texas coastline, limiting analysis. In MODIS imagery from 11/4 (shown page 1), elevated chlorophyll ($1-8 \mu\text{g/L}$) is visible stretching along- and offshore from Sabine Pass to San Luis Pass. Small patches of elevated chlorophyll ($1-5 \mu\text{g/L}$) are also visible stretching from alongshore the Matagorda Peninsula region to the Mustang Island region. Imagery alongshore much of the Padre Island National Seashore and South Padre Island regions is obscured by clouds, limiting coastal analysis in this area. Elevated chlorophyll ($1-4 \mu\text{g/L}$) is visible stretching 1-9 miles offshore southern South Padre Island. Elevated chlorophyll at the coast may contain *K. brevis* but could also be due to the continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

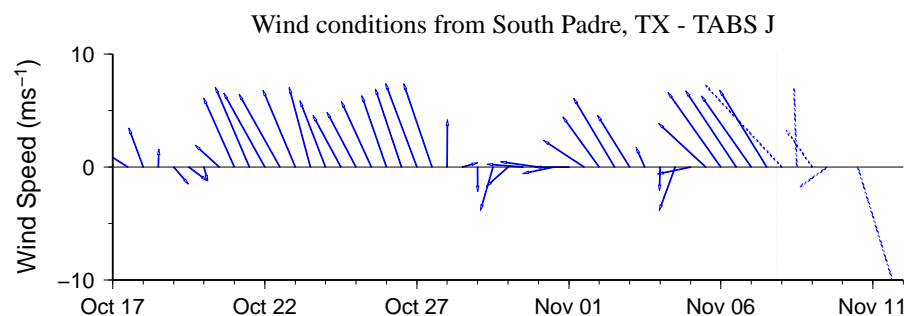
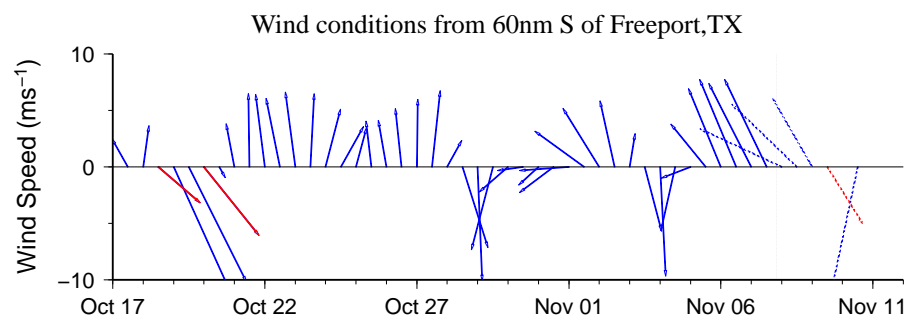
Forecast models indicate a maximum bloom transport from coastal sample locations of 60km south from the Galveston Bay region, 80km south from the Matagorda Peninsula and Aransas Pass regions, 20km south along the Padre Island National Seashore, and 20km north from Brazos Santiago Pass from November 4-10. Onshore winds over the next several days will increase the potential for impacts along the Texas coastline.

Derner, Kavanaugh

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Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

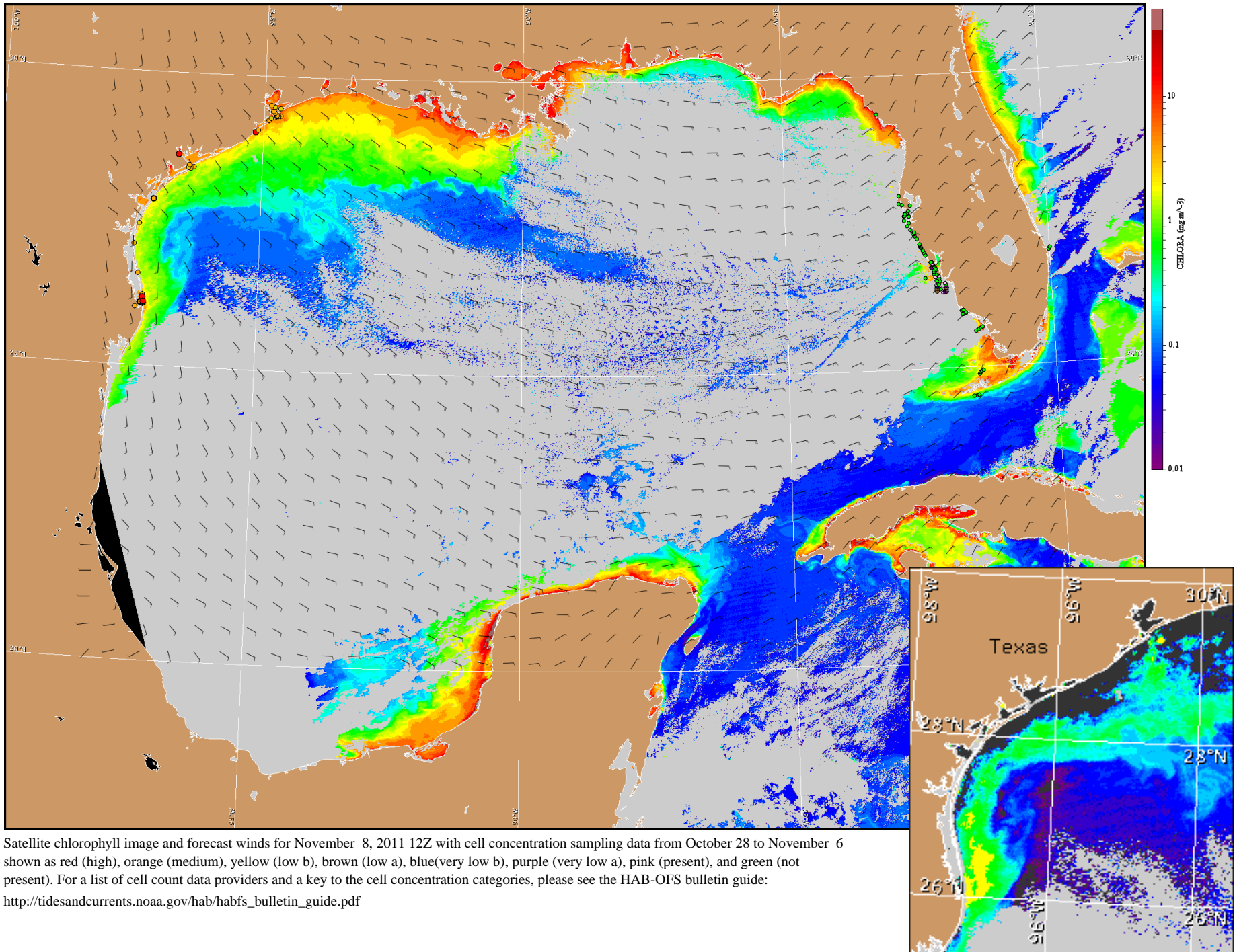


Wind Analysis

Galveston/Freeport: Southeast winds (10-15kn, 5-8m/s) today through Tuesday. South winds (5-10kn, 3-5m/s) Tuesday night, shifting north (20-25kn, 10-13m/s) after midnight through Wednesday.

Port Aransas: Southeast winds (15-20kn, 8-10m/s) today, shifting south (10-20kn, 5-10m/s) tonight through Tuesday. Northwest winds (15-20kn) Tuesday night, shifting north after midnight. North winds (10-25kn, 5-13m/s) Wednesday.

South Padre: Southeast winds (15-25kn, 8-13m/s) today. South winds (20kn, 10m/s) Tuesday, shifting southwest (10-15kn) Tuesday night and then north (15-25kn) after midnight through Wednesday.



Satellite chlorophyll image and forecast winds for November 8, 2011 12Z with cell concentration sampling data from October 28 to November 6 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).